

## **REMARKS**

Reconsideration of the application in light of the amendments and the following remarks is respectfully requested.

### **Status of the Claims**

Claims 1, 3, 5-6, 8-12 and 14-15 are pending. Claims 2, 4, 7 and 13 have been canceled without prejudice or surrender of the subject matter contained therein. Claims 1, 3, 5, 6, 14, and 15 have been amended. Independent claims 1 and 10 are amended to include features of canceled dependent claims. Claims 3, 5, 6, 14 and 15 are amended to change their dependency from now-canceled claims. No new matter has been added.

### **Allowable Subject Matter**

Applicant appreciatively acknowledges the Examiner's indication of allowable subject matter in claims 13-15. Independent claim 10 has been amended to recite the features of allowable claim 13. Accordingly, Applicant submits that amended claim 10, and dependent claims 11, 12, 14 and 15 are in condition for allowance.

### **Rejection Under 35 U.S.C. § 102**

Claims 1-5 and 7-8 stand rejected under 35 U.S.C. § 102(b) as being anticipated by EP 1,237,222 to Kodim. Claims 2, 4 and 7 have been canceled, thus, rendering the rejection moot with respect to claims 2, 4 and 7.

Amended independent claim 1 now recites the features of canceled dependent claims 2, 4 and 7. In the present Office Action, the Examiner contends that Kodim anticipates claim 7, and cites Kodim, paragraphs 0038-44. However, Applicant respectfully disagrees with the Examiner's reading of this cited portion of Kodim. Particularly, the Examiner contends that "the circuit inherently further include[s]" just two voltage input terminals.

Applicant submits that Kodim does not disclose a circuit which would be controlled by a pair of voltage-controlled (VC) terminals, nor does Kodim provide an incentive to control the circuit with only a pair of VC terminals.

On the contrary, the circuit disclosed by Kodim would inevitably need to be controlled by four VC terminals so as to independently switch diodes D1, D2, D3 and D4 in accordance with the table Kodim discloses prior to paragraph 0038, the table disclosed prior to paragraph 0051, and in accordance with Kodim Fig. 6. Further, Kodim discloses that a switch comprising four VC lines is a preferred embodiment (see paragraph 0020). Kodim neither discloses, nor suggests, an implementation as claimed in amended claim 1. In particular, there is no disclosure in Kodim of “the tuning circuit further including a first voltage input terminal connected to the anode of the first SP1T device and the cathode of the third SP1T device and a second voltage input terminal connected to the anode of the second SP1T device and the cathode of the fourth SP1T device,” as recited in amended claim 1.

Applicant submits that it was the specific insight of the inventor to reduce the number of control terminals from four to two by identifying that, for the structure of the switch claimed, the Low Band TX state of the switch requires that one pair of diodes D1, D2, D3 and D4 should be in the on state and that the other pair of diodes D1, D2, D3 and D4 are in the off state, and that the switching states of diodes D1, D2, D3 and D4 is reversed for the High Band TX state. Similarly that the RX state of the switch requires that the all diodes are in the off state.

The inventor recognized that the three logic states could be realized by just two VC lines if PIN diodes D1, D2, D3, D4 and biasing components LC, CB, CS, L1, L2, C1 and C2 are connected appropriately.

By way of explanation, in the description of the preferred embodiment of the present invention, PIN diodes D1 and D4 are switched off and PIN diodes D2 and D3 are switched on by the application of a low voltage to VC1 and a high voltage to VC2 (Switching state 2 of TABLE 2), and conversely PIN diodes D1 and D4 are switched on and PIN diodes D2 and D3 are switched off by the application of a high voltage to VC1 and a low voltage to VC2 (Switching state 3 of TABLE 2).

Applicant respectfully submits that it is only with the impermissible benefit of hindsight provided by the present invention that the Examiner could read the disclosure of Kodim on to original claim 7 and claim 1 as amended.

Withdrawal and reconsideration of the rejection is requested.

#### **Rejection Under 35 U.S.C. 103**

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kodim in view of the Examiner's statement of what was known in the art at the time of the invention. In particular the Examiner acknowledges that Kodim fails to disclose "that the first and second frequency-dependent impedances are the combination of the transmission lines T1-T2." However, the Examiner takes "official notice" and states that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide LC impedance to the circuit of Kodim in order [to] simplify circuit implementation." (See Detailed Action, page 5, bridging through page 6.)

The Examiner's contentions are not supported by any "concrete evidence in the record . . ." (See MPEP § 2144.04(c), *citing In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001).) Accordingly, Applicant submits that the Examiner is relying on personal knowledge and respectfully requests that the Examiner supports this personal knowledge with affidavits

containing data as specific as possible pursuant to 37 C.F.R. §1.104(d)(2). In accordance with § 1.104(d)(2), Applicant is permitted to contradict or explain such affidavits with affidavits of the Applicant or other persons. Applicant submits that without supporting evidence, the Examiner has impermissibly relied on personal knowledge and, thus, has not established a *prima facie* case of obviousness over claim 6.

Further, claim 6 depends from claim 1 and includes its own features in addition to the features of its base claim. Applicant submits that claim 6 is patentable over Kodim in combination with the Examiner's statement for at least the same reasons as demonstrated above. Reconsideration and withdrawal of the rejection is requested.

Claim 9 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kodim in view of U.S. Patent No. 6,249,687 to Thomsen et al. ("Thomsen"). The Examiner contends that Kodim discloses most of the features of claim 9, but acknowledges that Kodim fails to disclose "that the different band RX ports are each derived via a respective RF bandpass filter from the common node of the circuit." The Examiner relies on Thomsen Fig. 6 as disclosing the feature of claim 9 missing from Kodim.

Claim 9 depends from claim 1 and includes its own features in addition to the features of its base claim. Applicant submits that claim 9 is patentable over Kodim and Thomsen for at least the same reasons as demonstrated above. Reconsideration and withdrawal of the rejection is requested.

Claims 11-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Thomsen in view of U.S. Published Application No. 2002/0039056 to Kawachi et al. ("Kawachi"). Claims 11-12 depend from amended claim 10. Applicants submit that this

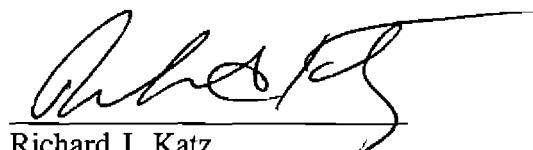
rejection is rendered moot in light of amended claim 10 reciting allowable subject identified by the Examiner. Withdrawal and reconsideration of the rejection is requested.

**CONCLUSION**

Each and every point raised in the Office Action dated August 9, 2006 has been addressed on the basis of the above amendments and remarks. In view of the foregoing it is believed that claims 1, 3, 5-6, 8-12 and 14-15 are in condition for allowance and it is respectfully requested that the application be reconsidered and that all pending claims be allowed and the case passed to issue.

If there are any other issues remaining which the Examiner believes could be resolved through a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

Respectfully submitted,



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